

Avoiding heat stress in GTMO

Story by MC2(AW) Honey Nixon, NAVSTA Public Affairs

It's another summer morning in Guantanamo Bay (GTMO). Wiping your brow as you walk to the car it becomes quite evident - it's going to be scorcher. For many GTMO residents this scene is no cause for concern - just another side effect of their location. But then again, its possible they've never been related to one of 200 people nationwide who die each year from heat-related illnesses.

"We are getting to that time of year that we are averaging 95 degrees," said Lt. Clayton Key, industrial hygiene officer for U.S. Naval Hospital Guantanamo Bay, "and that is just dry bulb temperature [not accounting for humidity]. Humidity is an issue because water is the major component of sweat. Heat-transfer is energy in the form of sweat into the atmosphere and if the atmosphere is already saturated with water(humidity), that transfer is not effective."

According to the *safetycompany.com* website, when exposed to severe heat, the body works to maintain a fairly constant internal temperature. The body produces sweat that, when it evaporates, cools the skin. But in extreme conditions, this process doesn't work as nature planned. When muscles are being used for physical labor, less blood is available to flow to the skin and release body heat. The body can't release excess heat, so its core temperature rises and the heart rate increases. As a result, the person starts to lose concentration, has difficulty focusing on tasks and may become sick or irritable. Some may faint or even die if they do not receive immediate care to lower their body temperature.

So what does this mean for residents exercising or working in GTMO's extreme heat and humidity?

"The most important aspects are being aware of your physical condition, hydration, and to be able to recognize humidity levels, said Clayton. "Residents can buy a barometer that has a humidity indicator, and they can also look at the weather flag conditions (located at the base gym, Kittery Beach, the hospital, Marine Hill, Bulkeley hall and Camp America.).

New personnel and their physical training coordinators also need to be aware of how heat stress can impact a good-intentioned, command workout.

"When you get [report] there, you shouldn't go out running right away," warned Clayton. "Give your body time to acclimate to the environment. This is where the responsibility of whoever is supervising the physical training session comes in. They need to keep track of how long and what kind of environments their people are coming from. A person in relatively good physical condition might take approximately three weeks to acclimate. Leaders need to be aware of their personnel and their physical conditions; what they can endure and not to push them too hard, this may result in heat-related illnesses."

So how does one assess their own unique risk factors for heat-related illnesses?

"Keep in mind that if your physical condition is not what it should be this can directly impact your risk for heat related injuries," advised Clayton. "Know your physical limitations. Be aware of how well you maintain hydration levels. This doesn't mean just drinking water before and after you exercise, but maintaining hydration throughout the day."

Becoming self aware of your habits in the heat means not only knowing yourself, but knowing what habits are downright dangerous.

"You see these people running in sweatsuits, that are impermeable [non-breathable material]," said Clayton in disbelief. "They are not losing body mass, they are losing water. This can shift you into metabolic and electrolyte imbalance. Wear loose clothing that does not trap the sweat you do produce. There are types of synthetic garments that will draw the sweat away from your body. Those are great. Also, you need to watch for black flag conditions, do not exercise if that black flag

is flying."

Clayton also offers some quick tips for winning the battle against heat and humidity:

"For those who are not long term runners, adjust run times to either early in the morning or late evening when the temperature is lower. If you become dizzy, short of breath, and have profuse sweating, adjust your workout routine - these are telltale signs you need to tone it down. Also avoid energy drinks and coffee because they are diuretics. The best thing to drink is water. Eat a balanced diet and don't skip meals. It pretty much just means going back to the basics."



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